



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,643	07/26/2001	Makoto Ikeda	12052.44US01	7982

23552 7590 06/17/2003

MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER

LEE, PATRICK J

ART UNIT PAPER NUMBER

2878

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/915,643

Applicant(s)

IKEDA, MAKOTO

Examiner

Patrick J. Lee

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This action is in response to amendment filed May 9th, 2003.
2. The indicated allowability of claims 1-3 & 10 is withdrawn in view of the newly discovered reference(s) to Fujimoto et al 6,259,082. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Fujimoto et al 6,259,082.

Fujimoto et al disclose an image reading apparatus comprising of light guide (10, 10'), light source (2), image sensor chips (52), housing (4), and glass plate (70).

With respect to claim 1, Fujimoto et al disclose a light guide (10') as illustrated in figure 23. The light guide (10') is substantially $\frac{1}{4}$ oval with the end of the major axis side is chamfered, forming a surface (10B'), which has grooves (14) for scattering light (see column 7, lines 7-8). Surface (10C') is a reflecting curved plane for reflecting scattered light from the light scattering patterns towards emission plane represented by surface

Art Unit: 2878

(10A'), which is parallel to the minor axis of the oval. Surface (10D') is a plane parallel to the major axis direction of the oval.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-4 & 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al 6,259,082.

Fujimoto et al disclose the system behind the rejection of claim 1 above.

With respect to claim 2, Fujimoto et al does not explicitly disclose that surface (10D') is chamfered so that it includes a focal position, but such is known and would have been obvious in order for the light guide to achieve the $\frac{1}{4}$ oval shape.

With respect to claim 3, Fujimoto et al disclose in the illustration as shown in figure 23 that there is a light-emitting device (2) disposed at the end of the bar-shaped light guide at surface (10B'). It is shown that surface (10A') is exposed for allowing light to be emitted, while the light guide (10') is disposed between housing portions (3A' & 3B'), shown in figure 24. While Fujimoto et al does not disclose the light guide (10') being disposed between housing portions (3A' & 3B'), such is known and would have been obvious to one of ordinary skill in the art to dispose the light guide in between, in order to illuminate scattered light onto the document.

With respect to claim 4, Fujimoto et al disclose the light guide section (10') and a glass cover (70) as a light condensing section located within close proximity as would be expected from the incorporation of the light guide illustrated in figure 23 into the device illustrated by figure 24. Light source (2) emits light into light guide section (10'). The light is scattered within the guide section (10'). While it is not explicitly disclosed that glass cover (70) is capable of condensing, such is known and would have been obvious to modify Fujimoto et al accordingly in order to allow as much light to be incident on the document as possible. This would result in improved image pickup ability of the device.

With respect to claim 10, Fujimoto et al disclose the system as described in the discussion of claims 1 & 3. Fujimoto et al also disclose a lens array (51) responsible for focusing light reflected from the document to an image sensor (52).

7. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al 6,259,082 in view of Yamashita 5,182,445.

Fujimoto et al disclose a system as described in the discussion of claim 4. However, Fujimoto et al does not disclose a light guide section and a light condensing section located in contact with each other. Such is known and taught by Yamashita. Yamashita in a contact type line image sensor device teaches the use of a lens (17) disposed next to a reflective surface (13) for condensing light onto a document (2). To modify the system taught by Fujimoto et al accordingly would improve the light condensing ability of the device by also augmenting to the light condensing ability of the glass plate (70) taught by Fujimoto et al.

With respect to claim 5, Yamashita discloses the reflecting surface (13) to be adjacent to the lens (17).

With respect to claim 6, Yamashita discloses the reflecting surface (13) to be an oval plane.

With respect to claim 7, Yamashita discloses housing (12, 12a) to be disposed about the light guiding section (21) and lens (17).

With respect to claim 8, the combination of teachings does not disclose a light guide section being provided with a light source and a reflecting means, but such is known and would have been obvious in order to obviate the need for a plurality of light emitting devices. Such would simplify the device significantly.

Allowable Subject Matter

8. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 9, the combination of teachings by Fujimoto et al with those of Yamashita does not disclose nor suggest the gradual increase of light scattering patterns.

Response to Arguments

10. Applicant's arguments with respect to claims 4-8 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2878

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tabata et al 6,333,779 disclose an illumination apparatus with a light guide.

Onishi et al 6,469,808 disclose an image reading apparatus.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Lee whose telephone number is (703) 305-3871. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (703) 308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-9558 for regular communications and (703) 306-5511 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Patrick J. Lee
Examiner
Art Unit 2878

PJL

June 5, 2003



DAVID PORTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800